

APPENDIX A HISTORICAL COMPONENT

The historical component of Hickory Bluff was not eligible for the National Register of Historic Places (NRHP) because it lacked intact historical features and cultural material that would contribute to research questions. Archival records of land use and the resultant material record were valuable, however, for aiding in the interpretation of the impacts to the Native American components of the site. The level of effort for archival research was considerably less for Hickory Bluff than for eligible historical sites, but a record of land ownership from the late 1680s to the present was compiled to provide background information for the evaluation of the historical artifact assemblage. Records at the Delaware Public Archives, Kent County Courthouse, the Historical Society of Delaware, and the Kent County Soil Conservation Service, Department of Agriculture Kent County Extension Office, were utilized. Aerial photographs from 1937, 1971, and 1995 were compared to historical maps from 1859, 1868, 1881, and 1893, for correlation to the archival record. The archaeological investigations conducted by Hunter Research on the Puncheon Run Connector were also reviewed and integrated into the current section.

ARCHIVAL RESEARCH

The parcel that includes Hickory Bluff is located in East Dover Hundred. Isaac and St. Jones River bound East Dover Hundred on the south, by Little Creek on the north, the Delaware River on the east, and by West Dover Hundred on the west. Dover Hundred, created from St. Jones Hundred in 1823, was divided into East and West Dover Hundred in 1859 (Doherty 1997:5). Historically, the St. Jones River has also been referred to as the St. Jones Creek and the Dover River, but the former title has been the most widely accepted and used nomenclature.

The St. Jones River drainage was an important waterway in the development of early colonial Delaware. Without the navigational potential of this river, Dover may not have developed into a thriving colonial town or the State Capital. The lands adjacent to the waterways in Delaware were the first land tracts patented in the late 1600s, as well as the first regions that became populated by colonial settlers and European immigrants. Only by the mid-1700s were the roadways able to support organized overland transportation routes. By then, the road to the east of the Hickory Bluff, now referred to as Route 113, was already established (Kent County Records [KCR] 1711).

The first land tract defined in the area of Hickory Bluff was granted to Robert Porter in 1680, along St. Jones Creek (River) (Table A.1). The parcel, known as *Porter's Lodge*, was a 400-acre tract surveyed by Ephram Hermann two years before William Penn defined the lower three counties of Pennsylvania that would become known as Delaware (KCR 1680b). A few weeks later, William Berry was granted a 1,000 acre tract named *Berry's Range*, which abutted the north side of *Porter's* (KCR 1680a) (Figure A.1). The two parcels were two of the earliest tracts surveyed in the Dover area.

Porter died in 1693, and *Porter's Lodge* was willed to his wife Elizabeth, as well as all of the household "goods and chattels" with the exception of 3 cows, 1 heifer and 1 mare that he devised to his two sons (KCR 1693b). Porter's estate paid £6 in 1693 (KCR 1693a). Although Elizabeth was supposed to make an inventory of his estate, nothing was included in the public record.

Robert French, a Scotchman from upper New Castle County, acquired a portion or all of *Porter's Lodge* sometime between 1693, when Robert Porter died, and 1704 (Scharf 1888:1080). In 1704, French transferred 110 acres to the Christ Church, listed as "*Curatoribus Ecclesiae*" (Scharf 1888:1052; KCR 1870). The provisions of the deed transaction have been, as the original deed was not transcribed in the deed books when they were rewritten in 1812. Scharf (1888:1052) specifically noted in the 1880s that the deed record had been misplaced.

Robert French married Mary Sandelands, daughter of James and Ann (Keen) Sandelands. Sandelands had been previously married to Maurice Trent, a mariner in Pennsylvania who died in 1697 (Pennsylvania Magazine 1879). French was a merchant and prominent in the Government of the Lower Delaware Counties. He was a member of the Provincial Council of New Castle County (1699-1700 and 1707); Associate Justice of the Provincial Court (1701); Representative of New Castle County in the General Assembly of the Province (1700); a leader in the

endeavor to achieve independency of the Provincial Government which culminated in an 1709 appeal to Great Britain; and was one of the founders of the Immanuel church in New Castle (Pennsylvania Magazine 1879:217-220).

Table A.1 Land owners of the Hickory Bluff Parcel, 1680-present

Grantor	Grantee	Date	Price	Acreage	Deed record	Comments
John G. Wharton, Joshua M. Twilley, David E. Shapiro	State of Delaware	1989	\$600,000	40 acres	Q46:248	Grantors were trustees under a Liquidating Trust Agreement by Wm Richter et al. as shareholders in Dover Fruit Farms, Inc.; Savitz had died and was replaced by Shapiro
DOVER FRUIT FARMS, INC.	John G. Wharton, Joshua M. Twilley, Joseph H. Savitz	1976	\$5.00	40 acres	C31:198	
William H Richter and wife	DOVER FRUIT FARMS, INC.	1946	\$1 for four tracts	40 acres	M17:173	
Clarence C. Ward and wife	William H. Richter et ux.	1927	\$7,000	40 acres	H13:314-316	
Roy A. Failing and wife	Clarence C. Ward et ux.	1923	\$8,000	40 acres	K12:422-424	\$4600 mortgage, \$1200 purchase money mortgage, and \$2200 cash
Joseph Smerbeck and wife	Roy A. Failing et ux.	1915	\$6,500	40 acres	X10:336-338	Danner Brothers bounding on the north
Charles H. Conghenour and wife	Joseph Smerbeck	1912	\$6,500	40 acres	H10:412-414	Danner Brothers bounding on the north
Gardner P. Thompson and wife	Charles H. Conghenour and wife	1910	\$6,000	40 acres	Z9:62-64	Danner Brothers bounding on the north
George G. Turner	Gardner P. Thompson and wife	1909	\$6,000	40 acres	I9:220-222	
Charles B. Prettyman and wife	George G. Turner	1892	\$2,000	40 acres	K7:327-328	
Henry Marquardt and wife	Charles B. Prettyman	December 7, 1891	\$6,500	40 acres	I7:214-215	
William and Harriet Coleman	Henry Marquardt	May 25, 1891	\$5,600	40 acres	H7:423-424	
Stephen Phelps and wife	William and Harriet	November 24, 1885	\$5,050	40 acres	U6:218-219	

Table A.1 Land owners of the Hickory Bluff Parcel, 1680-present

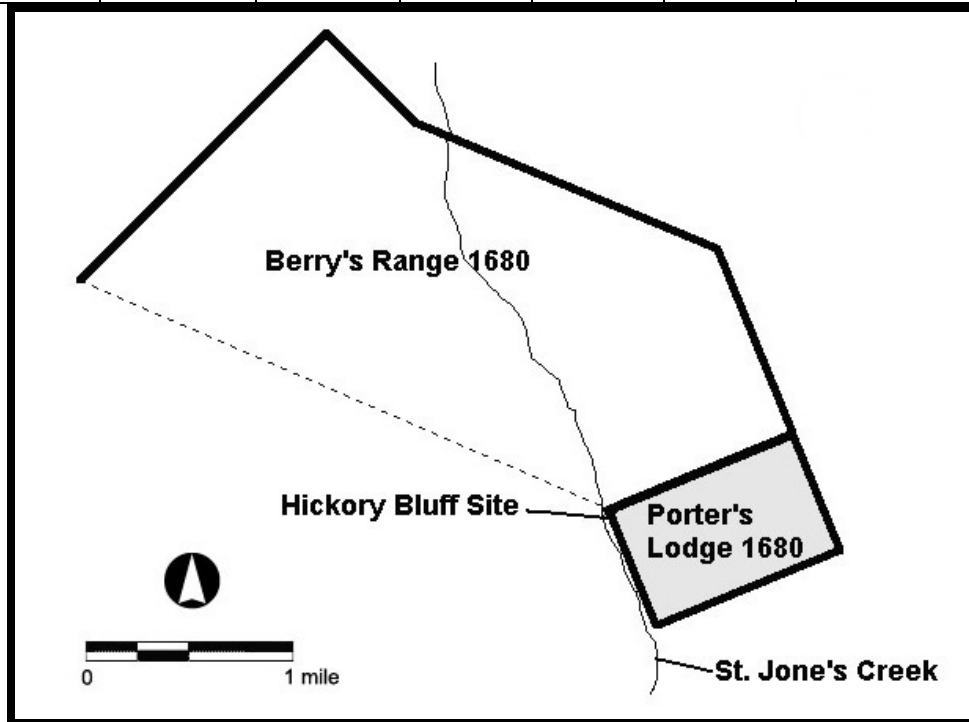
Grantor	Grantee	Date	Price	Acreage	Deed record	Comments
	Coleman					

Table A.1 Land owners of the Hickory Bluff Parcel, 1680-present (Continued)

Grantor	Grantee	Date	Price	Acreage	Deed record	Comments
David M. Barker	Elizabeth J. Phelps	May 26, 1885	\$4,800	40 acres	S6:250-251	Mentions northeast corner of the tract was the old northeast corner of the old "Glebe Tract"
Mrs. Almira Morgan	David M. Barker	May 12, 1885	\$4,600	40 acres	S6:249-250	Mentions northeast corner of the tract was the old northeast corner of the old "Glebe Tract"
James H. and Susan S. Porter	Mrs. Almira Morgan	1882	\$4,400	40 acres	K6:244	Mentions northeast corner of the tract was the old northeast corner of the old "Glebe Tract"
Charles Williamson Sheriff for Ormel Hoyt's land	James H. and Susan S. Porter	1873	\$1,500	40 acres	P5:336-338	Settling \$1200 debts of Ormel (Orinel) and Amelia Hoyt, with Julia J. Mauring (Manning?), widow of EJ Mauring (Manning)
William J. Elizabeth D. Clarke	Ormel Hoyt	1868	\$3,000	40 acres	G5:552-553	Clarke sold Glebe lot to WH Becker, but Becker sold 40 acres +/- to Ormel Hoyt illegally; Court said Clarke had to sell directly to Hoyt and not through Becker
Marshall B. Smith (Pastor), James F. Allee and Henry Ridgely wardens, Joseph Comegy, John C. Pemmervill, Edward Ridgely, Robert Justis, John Craig and James P. Wild vestrymen of Christ Church	William J. Clarke	1860	\$3,000	100 acres	R4:206-207	All the "Glebe", including James F. Allee and Henry Ridgely wardens, Joseph Comegy, John C. Pemmervill, Edward Ridgely, Robert Justis, John Craig and James P. Wild vestrymen of Christ Church
Robert French	Christ Church	1700-1713		110 acres	D1:31 in index same as D1:49 in book (page is	Glebe Lands for Christ Church

Table A.1 Land owners of the Hickory Bluff Parcel, 1680-present (Continued)

Grantor	Grantee	Date	Price	Acreage	Deed record	Comments
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Robert Porter	Robert French	Early 1700s		Not available	Not available	
Ephrim Harman	Robert Porter	1680		400 acres	Warranty Book A, entry 33	Porter's Lodge

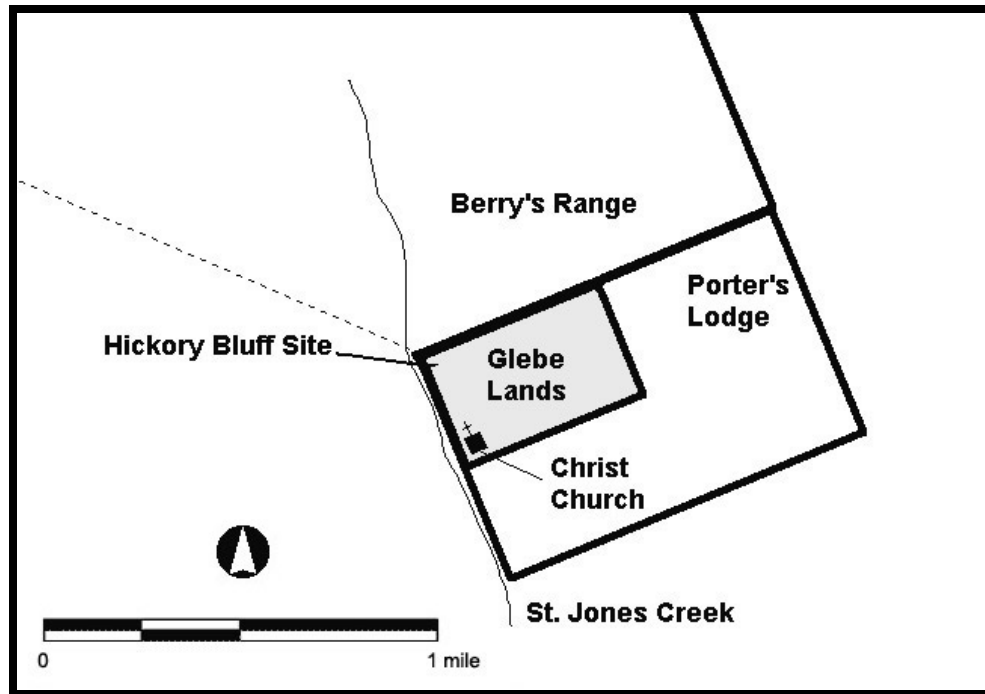
**Figure A.1 Land Grants for Porter's Lodge and Berry's Range from 1680**

The Society for the Propagation of the Gospel of Dover petitioned the Bishop of London in 1703, representing the “increase of sin and crime and the consequent great want of a Minister of the Gospel” (Scharf 1888:1052). In 1704, Robert French, as a member of the Society of the Church of England, transferred 110 acres of *Porter's Lodge* for the construction of a church, later named Christ's Church (Scharf 1888:1080). The property, known in the land records as the “glebe” lands, formed the southern boundary of the Hickory Bluff project area (Figure A.2). The term “glebe” signified any farm, estate, or parcel of land permanently assigned for the maintenance of the incumbent of a parish (New Advent 2000). Reverend Thomas Crawford, the first minister at the church, also taught catechism to the local African Americans. The church, a wooden structure, was supposedly located in the southwestern corner of the glebe near the St. Jones River in the southwestern corner of the present Capital Park housing development or just to the south along the bluff edge (Baynard n.d.:3-4, 8).

French completed his will on or about January 23, 1712, and died in September 1713 in Philadelphia. At the time of his death, he owned a number of tracts in Kent County as well as several lots and a house in New Castle. He bequeathed 600 acres from *Berry's Range*, the remainder of *Porter's Lodge* (300-350 acres), and 50 acres from nearby *Aberdeen* to his daughter Mary French (New Castle County Will Book 1713). Other parcels were willed to another daughter, Ann, who married James Gordon, was widowed, and then married Nicholas Ridgely (De Valinger and Shaw 1948:66).

Christ Church retained the lands for over 100 years. A new church was constructed in Dover, beginning in 1734 and finished by 1740 (Scharf 1888:1053). The purpose of the glebe lands from 1704 to the eve of the Civil War was to provide money for the church, but no records exist to describe the activities that actually occurred on the tract. More than likely the land was farmed and a portion of the profits given to the Church. An 1859 map illustrated the lands were still in possession of the Church, labeled "glebe" (Figure A.3).

The 1730s brick church in Dover was in great need of repair by 1859. Many of the years between 1704 and 1859, Christ's Church had been without a minister and the congregation had dwindled, and a rebirth of the Church was needed. In 1860, the minister, wards, and vestrymen of Christ Church sold the entire glebe to William J. Clarke for \$3,000, and \$1,800 went for the repairs on the church in Dover (Figure A.4; KCR 1860:206-207; Baynard n.d.:8).



**Figure A.2 Location of the Glebe Lands and Christ Church,
Given by Robert French from Porter's Lodge Tract**

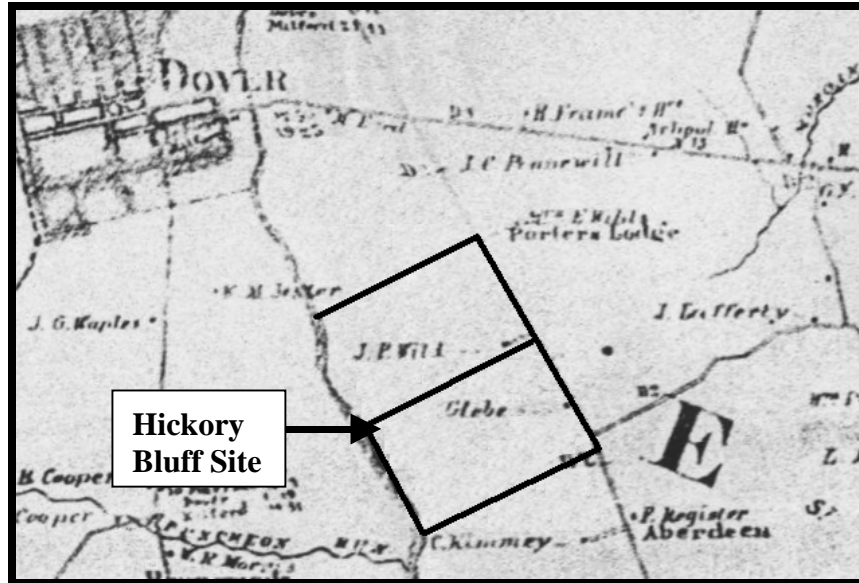


Figure A.3 Portion of the 1859 Byles Map of Dover showing the location of the Glebe Lands

The 1860 Agricultural Census for Dover Hundred (Page 1, line 10) listed William J Clarke as having 100 acres valued at \$3,000, with \$75 for farming implements, two horses, two milk cows, four swine (\$300 for all livestock), 1,000 bushels of Indian corn, 300 bushels of oats, 50 bushels of Irish potatoes, \$50 for slaughtered animals, and no orchard products. Clarke sold the 100- acre tract to William H. Becker in 1868 (KCR1873:552-555). However, before the deed record had been drawn and signed, Becker sold almost 40 acres to Ormel (Ormel) Hoyt. The court said that was illegal and Clarke had to sell the 40 acres directly to Hoyt, with Becker getting the remainder of the "glebe" lands (KCR 1873:552-553). The basic configuration of the parcel that Hoyt received remained the same until the State of Delaware bought the land in 1989 (Figure A.5).

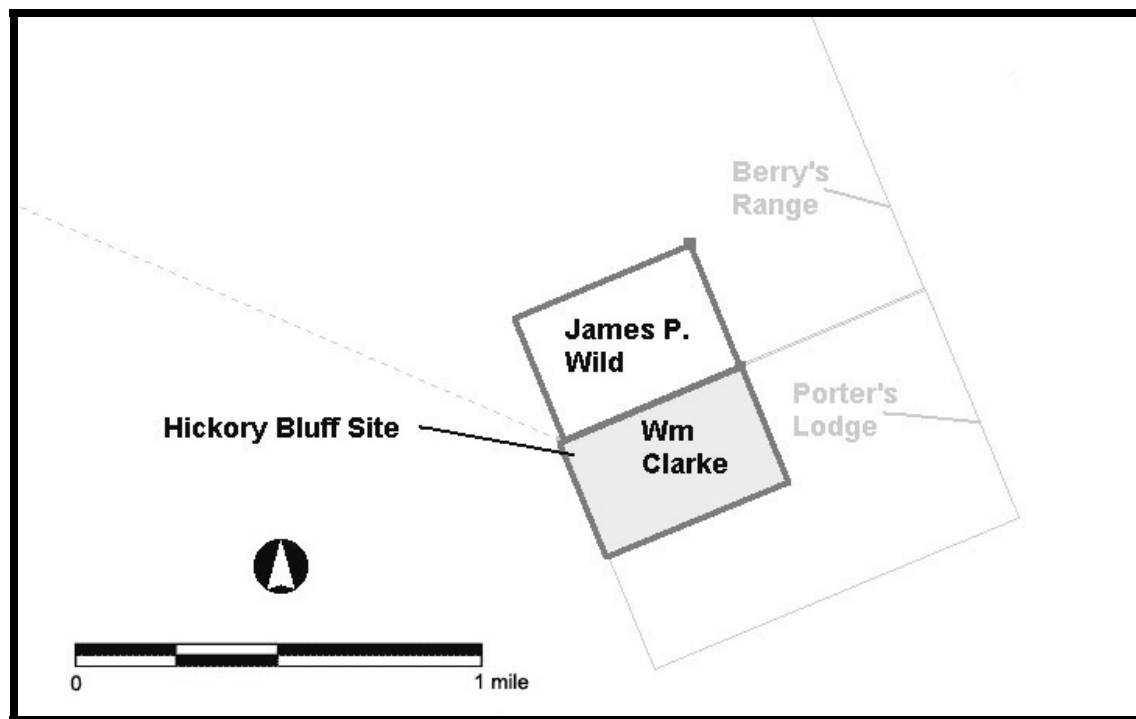


Figure A.4 William J. Clarke Lands Purchased in 1860 from the Christ Church Glebe

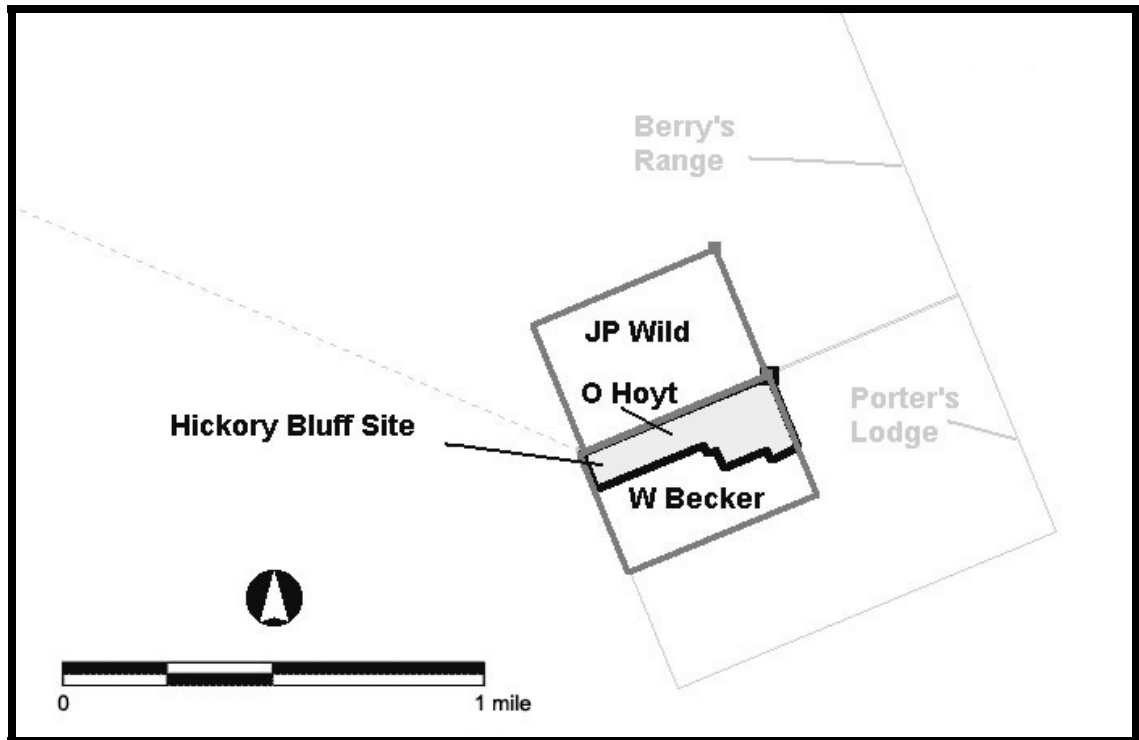


Figure A.5 The Hoyt Tract Purchased from William J. Clarke in 1868

The 1868 Beers Atlas reflected that William Becker owned or lived just to the south of the tract that Hoyt bought from Clarke (Figure A.5). James P. Wild owned the tract to the north, which presently contains the DelDOT Headquarters and other state office buildings (Figure A.6).

The 1870 Federal Agricultural Census for Kent County (Page 22, Line 26) listed Orimel Hoyt as having 40 acres valued at \$3,000, with \$165 for farm implements, one horse, one milk cow, two swine (\$110 value for all livestock), 100 bushels of Indian corn, 40 bushels of oats, 40 bushels of Irish potatoes (\$150 for produce of market gardens), six gallons of molasses, and a value of \$276 for all betterments and improvements. No mention of any orchard products was recorded in the census for the Hoyt tract.

The farm could not be located on the 1880 Federal Agricultural Census, after Hoyt lost the land to tax debt. Subsequent agricultural censuses have periodically been destroyed by decree of the U.S. Congress (U.S. Congress 1912). From 1873 to 1912, the tract changed ownership ten times, until Joseph Smerbeck purchased the land (KCR 1912:412-414). During that time frame, a fruit orchard, more specifically an apple orchard, was established at Hickory Bluff and Route 113. Kent County tax assessment records did not yield information on the historical activities on the land tract, and therefore, do not aid in providing a specific date for the origin of the apple orchard. However, statistics indicate that almost 90 percent of Delaware apple trees were planted between 1905 and 1924 (Gabriel 1953:9-10). Therefore, the earliest date the orchard was planted was probably not much earlier than 1905. The Farm Journal of 1913 listed the farm, owned then by Joseph and Margaret Smerbeck, as containing 45 acres and producing fruits and grapes, narrowing the date of origin from 1905 to 1913 (Atkinson 1913:55).



Figure A.6 The 1868 Beers Atlas Map for Dover Hundred Showing Hoyt and Wild tracts

During the earliest period of orchard development, changes were made to the St. Jones River to improve navigation. Although the river provided Dover its main access to the Delaware Bay, the wharves at Lebanon, some three miles downstream from the capitol, were long considered to be the practical limits of navigation (U.S. House of Representatives Document 1116 1908:2). In 1908, a comprehensive plan was submitted by the War Department Corps of Engineers to improve the full length of the St. Jones and make it navigable all the way to Dover. This plan called for the construction of sixteen major cut offs, together with dredging of the existing channel (U.S. House of Representatives Document 1116 1908:13-15). One of these cut offs comprises the present-day St. Jones channel by Hickory Bluff. A design plan for this artificial channel, labeled St. Jones Cut Off No. 2, is clearly shown on the plat accompanying the Corps of Engineers survey (Figure A.7). The original St. Jones meander is now silted in and is connected to the navigation channel only by a tidal mud flat on its downstream end. Other cut offs associated with the early twentieth century navigation enhancements are discernable on the USGS Frederica quadrangle.

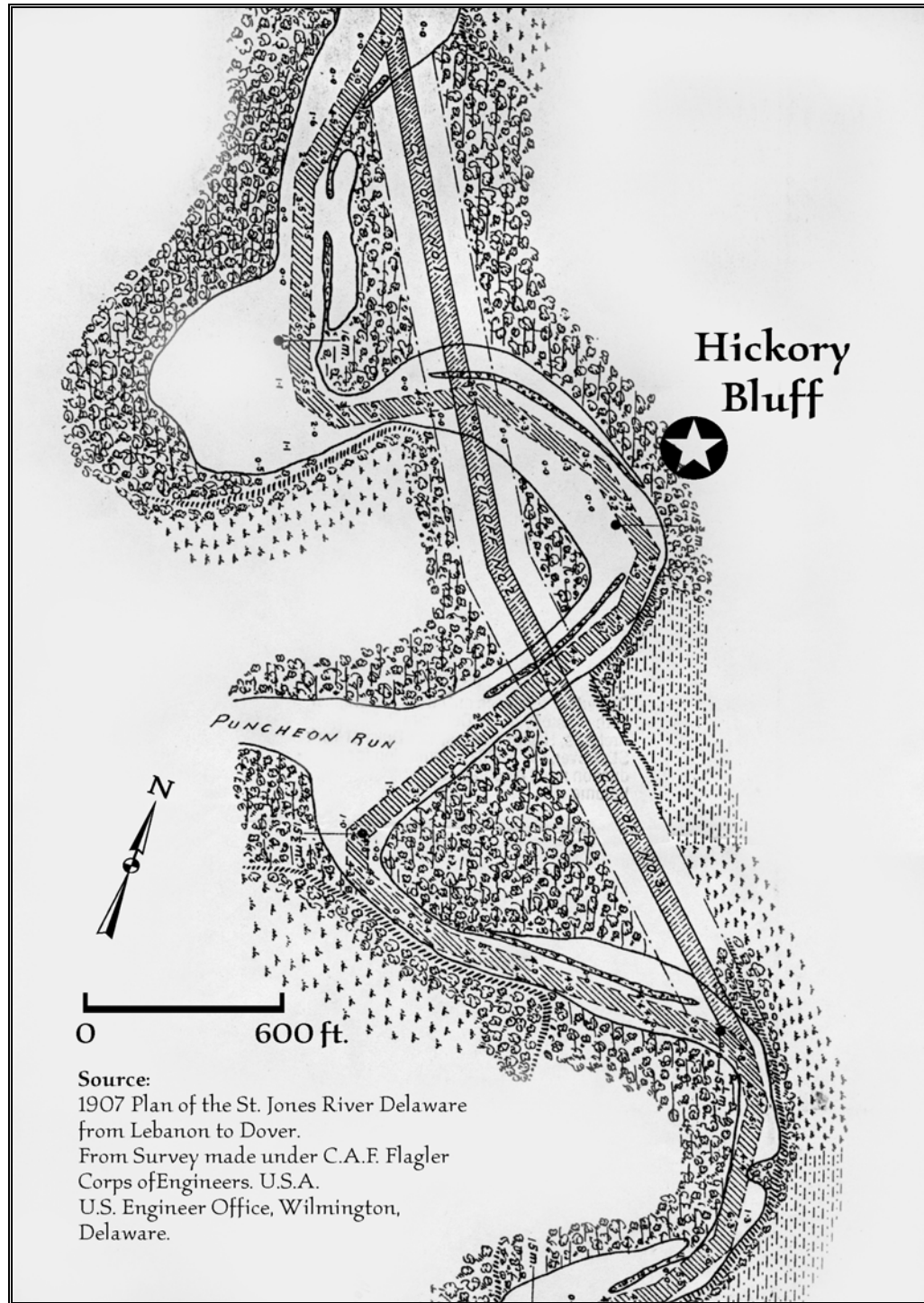


Figure A.7 1907 Plan of the St. Jones River Survey

In 1927, William H. Richter and his wife purchased the tract when part of the orchard would have been fully mature, as were many of the fruit orchards of Delaware. The apple orchards of Kent County were concentrated in the Wyoming and Camden regions, only a few miles to the southwest of the site (Figure A.8; Hancock 1976:35; Bausman 1936:24). Richter became a large fruit producer, one of the five or six largest in the immediate vicinity around Dover by 1936.

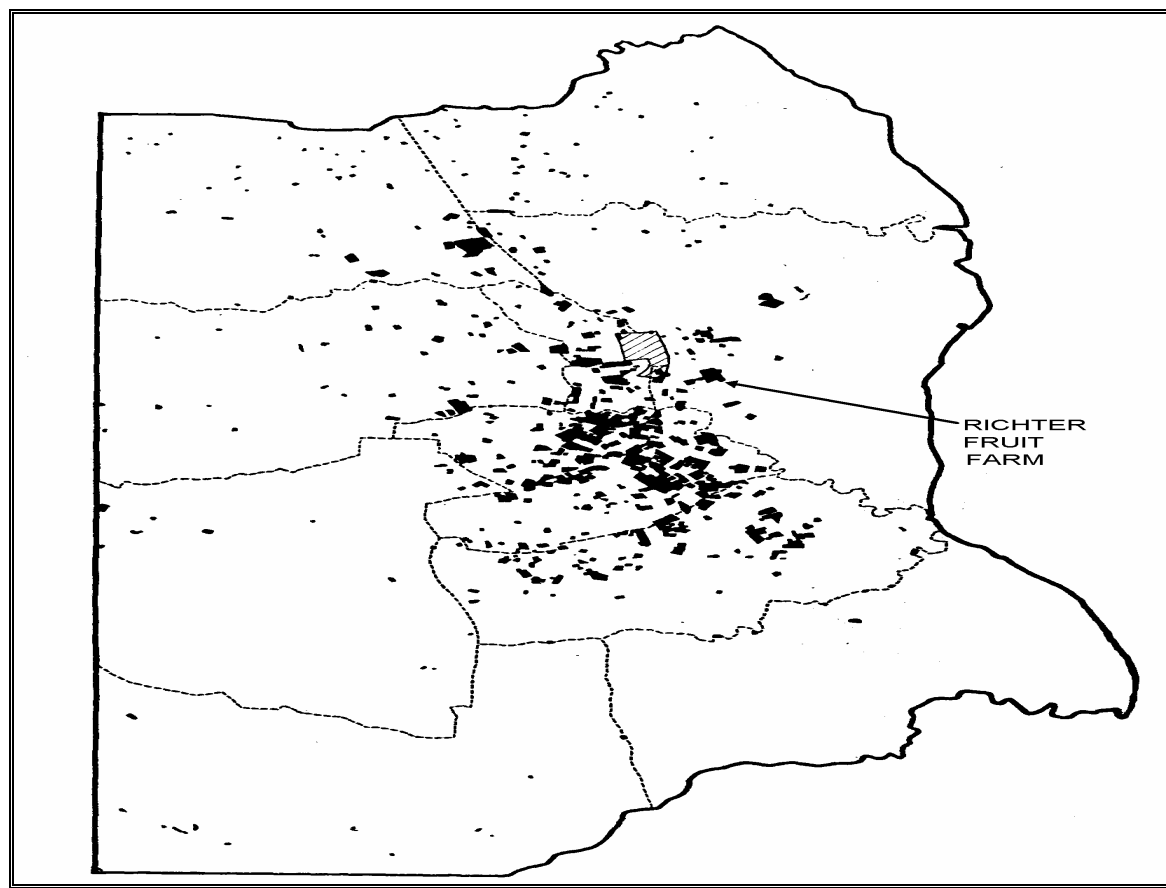


Figure A.8 Distribution map of Delaware fruit farms in 1936 (after Bausman 1936:24)

A 1937 aerial photograph illustrated an intact orchard under full operation on the 40 acre tract (DelDOT 1937:Figure A.9). The trees in the western half of the orchard appeared to be more mature than those on the eastern half of the tract, and a fruit stand was located near Route 113.



Figure A.9 A 1937 DelDOT Aerial Photograph Illustrating the Size of the Richter Orchard

Richter was apparently a successful fruit grower and was able to expand his operation across Route 113 to the east, almost quadrupling his fruit orchards (Figure A.10). In 1946, Richter incorporated his farm into the Dover Fruit Farm, Incorporated (KCR 1946:173) which dissolved in 1976 (KCR 1976:198). The trustees of the fruit farm after liquidation sold the tract to the State of Delaware in 1989 (KCR 1989:248). Joshua M. Twilley, one of the trustees on the 1989 transaction and still alive in September 2000 at the age of 72, stated that the Richter family have all died and no one kept the records of the Dover Fruit Farm, Inc.

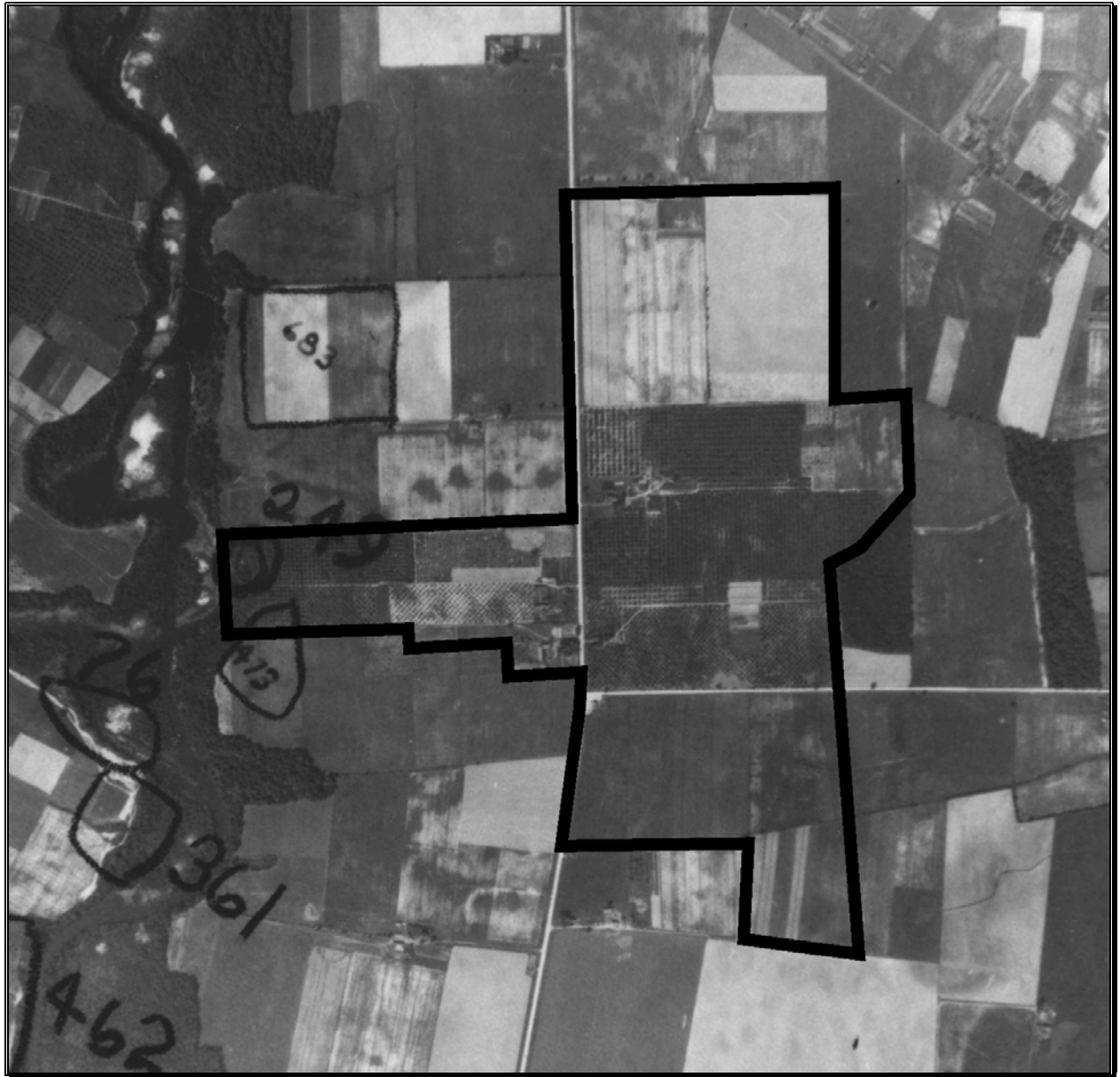


Figure A.10 The Entire Richter Fruit Farm on a 1937 Aerial Photograph

ARCHAEOLOGICAL INVESTIGATIONS

The survey and evaluative fieldwork encountered two historical surface scatters along the west edge of the bluff within Hickory Bluff (Liebeknecht et al. 1997). One scatter contained early twentieth century material and a number of equine salt feeders. The second scatter contained late nineteenth century artifacts. The wooded area on the rim above St. Jones River had never been plowed, although the church may have farmed it in the 1800s, but a

plowzone was defined to extend from that spot, east towards Route 113 (Liebeknecht et al. 1997). The main house on the survey tract, designated the William Richter House Site 1 (K-1003), burned to the ground in the late 1980s, and the rubble was pushed into the basement area. A nearby structure, William Richter House Site 2, was probably constructed after the 1930s and razed at the same time as the main farmhouse. Neither of the two Richter house complexes was recommended for further archaeological evaluation (Liebeknecht et al. 1997).

During the initial stages of archaeological excavations by Parsons, all prehistoric, historical and modern artifacts were collected. As fieldwork progressed during the Parsons investigations, historical artifacts were sampled. Obviously modern material, such as plastic items, shotgun shells, beer bottles, plastic fence insulators, television tubes, 1960s vintage pennies, and cigarette butts, were no longer noted on field forms/records and were discarded. Architectural materials associated with the surface trash dumps were noted and a sample was collected. Unrecognizable ferrous objects, such as farm implements and parts, were noted and not collected.

Historical Features

Three historical features were defined during excavations: one possible planting bed remnant and two postholes (Table A.2; Appendix C). Feature 125 was unique at Hickory Bluff; it was rectangular in planview and while the walls sloped to a flat bottom. A corner of the feature was encountered at the base of the plow zone. The soil matrix was substantially darker in color than the surrounding E-horizon soils. No artifacts or charcoal were recovered from the feature fill. Given its angular form, Feature 125 was historic in origin and may have been a planting bed associated with orchard cultivation. Features 193 and 198 were both postholes; no evidence of post molds were observed. Feature 193 was irregular in planview. The bisection excavation revealed steep-sided walls and an uneven floor. The feature fill was dark yellowish brown and was both darker in color and had a more loamy texture than the surrounding E-horizon. No cultural or organic materials were recovered from Feature 193. Feature 198 consisted of a roughly circular area of darker colored soil. The bisection excavation revealed a regular profile with steep sides and rounded bottom. The feature fill was considerably darker than the surrounding soils. One small piece of uncarbonized wood and a single U-shaped, steel staple was recovered from the feature. The two postholes, Features 193 and 198, were located along the west edge of the orchard and may indicate the remains of a fence line.

Table A.2. Historical Features at Hickory Bluff

Feature Number	Provenience	Location	Morphology	Artifacts	Dimensions
125	N304 E698	Block B	Rectangular (corner)	None	57 cm x 39 cm x 9 cm (partial)
193	N374.9 E653.7	Backhoe Strip	Irregular, bulbous	None	34 cm x 18 cm x 16 cm
198	N376 E655.3	Backhoe Strip	Round	1 steel staple	20 cm x 18 cm x 16 cm

Historical Artifact Assemblage

The historical database included 4,878 items from the Hunter and Parsons investigations. The combined database provided an overall concept of the activities and distributions of the historical artifacts at the site. Over 2,600 samples of charcoal, nuts, and seeds were included in this number, but are not considered essential in this discussion on historical artifacts. A total of 2,260 historical artifacts were recovered from the archaeological investigations (Table A.3).

The domestic assemblage consisted of a variety of ceramics, clay pipe stems, clothing, bottle glass, lamp chimney glass, coins, coal and clinkers, marbles, leather shoe soles, utensils, pocketknife, and sanitary cans. Ceramic types identified at the site included Chinese and European porcelain, coarse redware, whiteware, American stoneware, yellowware, ironstone, several sherds each of creamware and pearlware, and one sherd each of Westerwald and delftware. Ceramic vessel types included teacups, cups, mugs, flatware, and bowls. Clothing items included bone, brass, and rubber buttons; buckles, and shoe soles. Bottle glass colors collected at the site included olive green, green, aqua, solarized amethyst, cobalt blue, milk glass, amber, brown, and clear. Bottle shapes indicated former contents including beer, ginger beer/ale, soda pop, canning jars, baking soda, pharmaceutical, condiments, ink, and

cosmetics. Two King Charles III Spanish Reales were recovered from the same location, one from 1772-1789 and the other from 1786. However, the date of the coins does not absolutely indicate the date of deposition, as Spanish coinage was still utilized in the United States until 1857, when foreign currency was no longer accepted for purchasing goods and the practice was designated illegal (Whitley 1991:11). The coins were well worn and not corroded, suggesting a long life of use before deposition. Other coins from the site include several Lincoln pennies and Roosevelt dimes from the early to mid-twentieth century.

The architectural assemblage consisted of moderate amounts of rusted nails, spikes, brick fragments, and broken window glass, with small amounts of bolts, nuts, screws, mortar, and hinges. The nail assemblage consisted of a few hand wrought and wire nails, but predominately hand wrought/machine cut nails and dozens of indeterminate nails. While the level of effort on the site did not fully determine if the recovered brick fragments were hand molded or machine made, the fragments with identifiable characteristics for machine made bricks, such as sharp edges and homogenous matrix with few inclusions, appeared to constitute a majority of the recovered brick assemblage. Most of the window glass was aqua in cross-section suggesting a twentieth century manufacturing date.

The agricultural-related artifact assemblage consisted of fence items, horseshoes, chain links, dog rabies vaccination tag, and salt block containers/feeders. The fence items included a short section of barbed wire, fence staples, and plastic fence insulators. The arms and ammunition artifact assemblage consisted of a Minie type bullet, lead shot, percussion caps, shotgun shells, and rifle cartridges ranging from the mid nineteenth to mid-twentieth century in age.

Table A.3 Historical Artifact Classification and Description

Class	Count	Description
Domestic Bottle, vessel, and container	539	Mostly glass, some stoneware fragments; fruit jar fragments
Domestic ceramics	305	Delft, Chinese and European porcelain, coarse redware, whiteware, American stoneware, yellowware, ironstone, several sherds each of creamware and pearlware, and one sherd each of Westerwald and delftware
Personal	39	Clay pipestems, coins (including Spanish Reales), ink wells, marbles, doll parts, cosmetic, ointment
Clothing	10	Shoe, buckle, snap, button
Architectural	509	Cut, cut/wrought, and wire nails; brick, window glass
Hardware	21	Nuts, bolts, screws, hinges,
Agricultural	9	Horse shoes, horse shoe nails, salt feeder
Tools	2	Paintbrush, pocket knife
Fencing	27	Barbed wire, fence staples, insulators
Gardening	45	Terra cotta flowerpot fragments
Arms and ammunition	23	Shotgun shells, rifle cartridges, percussion caps, Minie type bullet, lead shot
Fuel	116	Coal, clinkers
Faunal	504	Bone (deer, mammal, turtle, chicken, pig, opossum, undeterminable vertebrate, bird, clam, oyster, snail)
Flora	2618	Predominately charcoal samples, with nuts and seeds
Undetermined	111	Predominately metal objects

The historical assemblage was sorted in 100- year categories to examine temporal shifts in the occupation and use of the site (Table A.4). Detailed information beyond that temporal level was reserved for specific artifacts, such as the Spanish coins, and was not attributed to the assemblage as a whole.

Table A.4 Temporal Distribution of Hickory Bluff Historical Artifacts by Century

Century	Count
18 th	4
18 th /19 th	45
19 th	28
19 th /20 th	633
20 th	220
indeterminate	1132

Four artifacts date from the eighteenth century, the two Spanish coins, a fragment of delft, and a fragment of Westerwald ceramics. The eighteenth/nineteenth century artifacts were predominantly ceramics, for which a tighter date of manufacturing was not available. The dominance of artifacts on the site manufactured in the nineteenth to twentieth centuries supports the archival research in that the land tract encompassing the site was not formally occupied by tenants or owners until after the Christ Church sold the property in 1859 to William Clarke.

Historical Artifact Distribution

The majority of the historical assemblage was recovered from the plow zone within the west edge of the orchard area (71%). Lesser amounts were from the western edge of the site, including the humus horizon (10%), the buried stratum below the humus (8%), surface collections (3%), and in features (8%). Sixty-three features contained historical artifacts, faunal and/or floral remains; these included basins, thermally altered stone concentrations, a historical posthole, tree roots and tree molds (Table A.5). About 43 percent of the features were or contained a natural element (i.e., feature designations C, D, E, or F). Recent (uncharred or weathered) floral remains constituted the majority of historical artifacts found in the features. The historical component contained little vertical integrity, especially since recent plowing had apparently disturbed the majority of the site. However, as will be shown, the presence of the orchard and the edge of the plowed area played a role in the deposition of the majority of the historical and modern assemblage.

Table A.5 Hickory Bluff Features with Historical Artifacts

Feature Number	Feature Type	Historical Artifacts	Faunal Remains	Floral Remains
1	B1	1	8	12
2	B1-a			8
3	B2			1
5	E3			20
6	E3			1
9	B1/E3			31
10	B1/D3			101
12	F1		2	1
13	E3			2
19	E3	1		
37	B3-a		1	
38	B1		3	

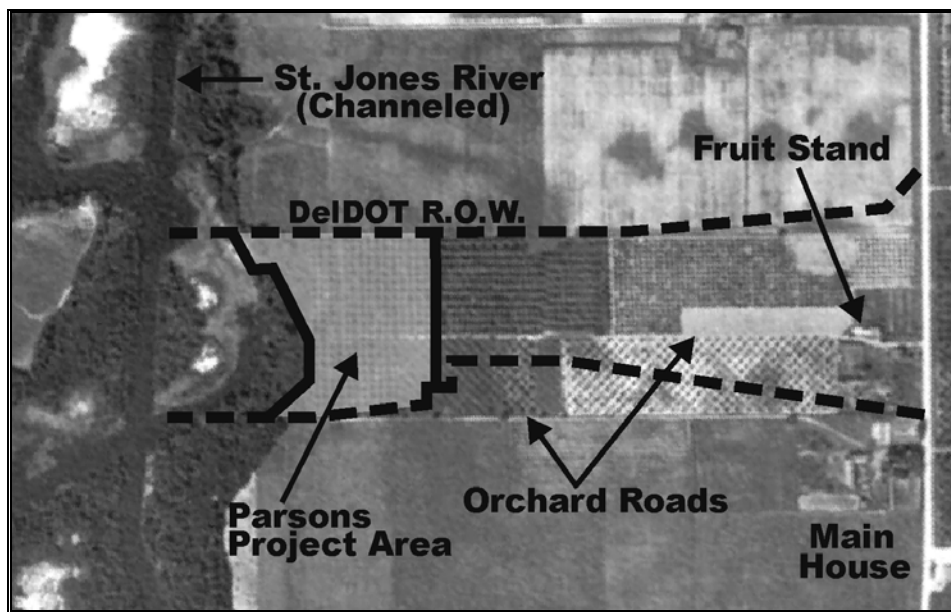
Table A.5 Hickory Bluff Features with Historical Artifacts (Continued)

Feature Number	Feature Type	Historical Artifacts	Faunal Remains	Floral Remains
47	D2	1		
60	B1		1	
63	D2			1
66	D2			1
67	B2		2	
77	B1-a		1	5
78	B1-b			1
88	D1			1
90	B1-a			6
93	F1			1
106	D1		2	
120	B3-a		1	1
127	D1		1	
129	B1-d	2	24	12
134	D1	1		
137	B3-a		12	1
139	B2		2	3
169	B1-a			8
172	A1-b			1
173	A1-a			1
180	B2			5
184	B1-a			30
188	E1			2
198 (historical posthole)	B3-b	1		
232	B1-c/D3		6	4
233	B2			2
249	A1-a		6	
253	B1/D3			2
257	F1/B		10	3
265	B1-c		1	1
267	B3-b/D1			2
273	B1		2	1
275	B1-d		5	3
279	B1		1	
288	B1		2	
297	A1-a			1
310	D1		2	1
313	B1/D2/D3			1

Table A.5 Hickory Bluff Features with Historical Artifacts (Continued)

Feature Number	Feature Type	Historical Artifacts	Faunal Remains	Floral Remains
400	B3-a	1		1
402	B1/D2			50
403	A1-a			6
404	B1-a			202
405	B2			40
406	B1-a/D3	2	55	149
407	B1-a/D3	1	7	214
408	B1-a/F1		9	297
409	B1-a		5	89
410	B1-a			173
411	B1-a		5	32
416	C1			55
419	D2			6

The architectural and domestic artifact classes, artifacts generally associated directly or indirectly with a structure and occupation, constitute 82 percent of the total historical artifacts. However, no historical structural features were encountered during the archaeological investigations, suggesting the artifacts could be the result of a field scatter or several trash dumping episodes, which can be determined from the artifact distributions across the site. A 1937 aerial photograph was used to correlate the archaeological information with landmarks and land use information to help define the site functions (Figure A.11). The access road through the middle of the orchard to the bluff edge was also plotted onto a site map, as well as the western edge of the orchard; both derived from the 1937 aerial photograph (Figure A.12).

**Figure A.11 Aerial Photograph from 1937 (DeIDOT) with Landmark Features Around the Site**

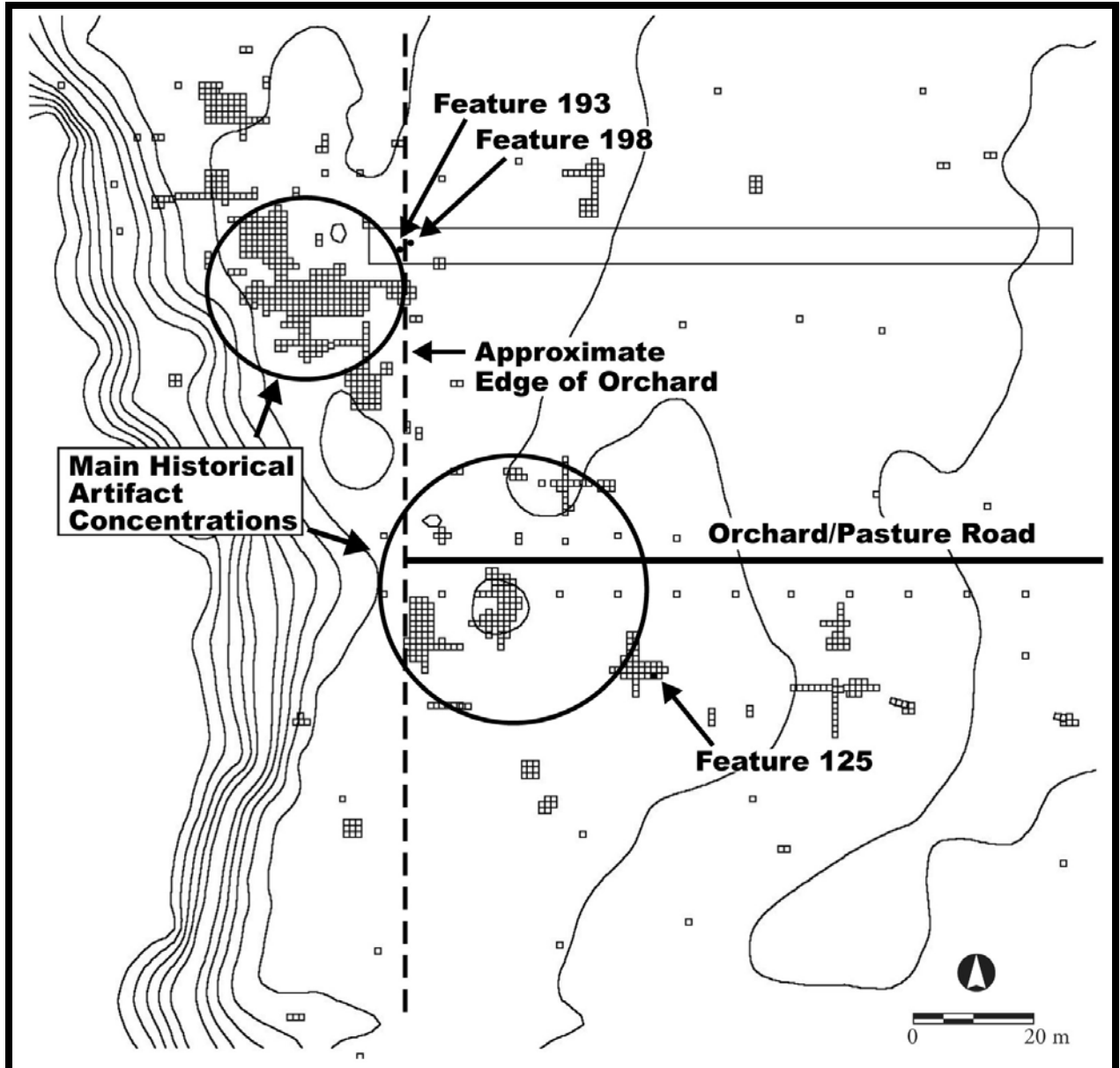


Figure A.12 Hickory Bluff Site Map with the Edge of the Orchard and Orchard/Pasture Road

The historical artifacts were distributed across Hickory Bluff, with increases in the density of historical material in the central and northwestern sections. The earliest identifiable historical activity on the site occurred in the late eighteenth or early nineteenth century when clay pipe stem fragments and two Spanish Reales were deposited in close proximity to one another along the bluff. The area along the bluff may have been a favorite spot for temporary recreation for a farmer or a fisherman, or travelers. The rifle casings and shotgun shells were also predominately located along the bluff edge. Twenty-three ammunition related artifacts were recovered from the site, ranging in age from the mid-nineteenth century to the present (Barnes 1989:421; Logan 1959:33, 191). The location of the pipe stems, coins, and ammunition along the bluff suggests leisure or non-work related activities occurring along the edge of a field.

Almost the entire bone assemblage was located along the western edge of the site, comprising mainly large mammals and unidentifiable vertebrate fragments. Small amounts of chicken, deer, pig, bird, snail, and opossum bone were also recovered from the same areas. The presence of the faunal assemblage along the bluff is considered

to be partially natural, from animals dying in the area, and partially cultural, from discarded bone dumped with the trash. The presence of deer bone along the bluff edge combined with the arms and ammunition located in the same region suggests hunting activities. The few fence related artifacts were found closer to the west end of the site, probably to keep people and/or animals out of the orchard.

The remainder of the artifact assemblage is difficult to separate and define by spatial distributions. The architectural and domestic artifacts were located across the entire site, with increases and decreases in both classes in the same areas (Figure A.12). The distributions of the nineteenth and twentieth century artifacts, constituting the majority of the assemblage, correlate with the distributions of almost all other artifact categories, except the faunal, arms and ammunition, clay pipe stems, and coin assemblages. Cut and cut/wrought nails, brick, window glass, coal and clinkers were scattered across the site. Modern architectural debris was also found in the same distribution patterns as the nineteenth-twentieth century artifacts, including small numbers of hinges and Teflon roller door parts and in the same spatial distribution as the other architectural artifacts, suggesting dumping episodes from a razing or remodeling of a nearby structure.

The distribution of historical and modern artifacts appears to relate directly to the presence of the central orchard/pasture road. The terminus of the orchard/pasture road was situated near the higher concentrations of artifacts, particularly the architectural and domestic classes (Figure A.12). Since no evidence in the archival or archaeological record has suggested that a historical structure ever existed on this portion of the land tract, the site artifact distribution most likely relates to utilization as a dump or trash scatter. A wagon or truck could easily have taken a load of trash to what the landowner or tenant probably viewed as the “backside” of the orchard and dumped it directly on the ground without going too far off the established path.

Archival information has indicated that the only historical structures on the parcel were probably constructed no earlier than the 1860s, when William Clarke bought the tract from Christ Church. These buildings were constructed adjacent to Route 113, near the area of the two Richter house sites to the east of Hickory Bluff. After the orchard was constructed in the early 1900s, the potential for a structure being built on that part of the tract is minimal. Therefore, the historical artifact assemblage at Hickory Bluff were situated on what could be referred to as the “backside” of the property from the building complexes, probably accumulated from random dumping from the main building complex to the east. The farmer probably hauled the trash to the bluff edge to remove the trash away from the buildings behind the apple orchard.

HISTORICAL LAND USE

The 1860 and 1870 Federal Agricultural Census returns indicated the tract was largely utilized for grain crops such as oats, Indian corn, and potatoes during the third quarter of the nineteenth century. The first direct evidence of the presence of the orchard was in a 1913 farm directory for Kent County, illustrating the farm was used for fruits and grapes (Atkinson 1913:55). Archival research has indicated the orchard was probably planted sometime between 1905 and 1910. A review of statistics from the region yields data that can aid in further isolating the date of origin for the orchard. Gabriel (1953:9-10) gave the following historical statistics on the apple industry in Delaware and Kent County: 90 percent of Delaware apple trees were planted between 1905-1924; 64 percent of Kent County apple trees were on 20-100 acre farms; and 64 percent of Kent County apple orchards had 1,000-5,000 trees. The data indicates that more than likely the orchard was less than 10 years old in 1913, when it first appeared in the Kent County farm journal. The land tract was almost 40 acres, and contained around 2,000 to 2,200 trees, based on computations of tree spacing from aerial photographs, which would place the orchard within the average acreage and number of fruit trees on apple orchard farms in Kent County during that time period.

The preparation and planting of a fruit orchard was sometimes a lengthy process. Sears (1927:44a) suggested that “an orchard will usually stand from 10 to 100 years” and it was worth the farmer’s time and effort to put some thought into the planning and planting of the orchard. The land was recommended to be cultivated the year before planting an orchard, with a crop that would leave the soils in good condition, such as beans, corn, or potatoes (Sears 1927:45). Few farmers, it is further noted, would agree to planting a crop and waiting a full year to gain a small advantage over just forging ahead and planting (Sears 1927:46). Therefore, plowing the field the fall before planting the orchard was recommended to allow the organics to decay under the surface over the winter (Sears 1927:46-47).

After the soils had weathered a good hard winter, the following spring the surface was smoothed out with a planker, or platform dragged across the surface to level the furrows and high spots (Paddock and Whipple 1913:30-31). The land containing the orchard east of Hickory Bluff is fairly flat and was probably sufficiently level prior to the establishment of the orchard without too much need of a leveling operation. Once leveled, the orchard could be planned with great precision.

The cornerstone to a successful operating orchard was the spacing between the trees. The capital needed to start an orchard greatly depended upon the number of saplings to be planted and the more trees the farmer could crowd into his field, the better. However, there was a certain spacing that had to be maintained to allow for the trees to mature and produce high yields. A.J. Downing (1855:60) stated that fruit trees should be placed approximately 40 feet apart, but a few years later, in 1869, it was suggested that maximum placement was at 12 feet apart between trees in a row, and 16 feet apart between rows (Quinn 1869:26).

Rectangular and hexagonal orchard planting configurations were both available to farmers. Both patterns were present in the orchard in the 1937 aerial photograph of the Hickory Bluff vicinity. Trees planted in a square or rectangular pattern at a 30-foot spacing could accommodate up to 48 trees to the acre. Hexagonal planting could incorporate up to 15 percent more trees per acre (up to 55 trees) than the rectangular system (Paddock and Whipple 1913:42; Figure A.13). The square or rectangular method of planting was apparently the most satisfactory method of planting an orchard (Paddock and Whipple 1913:42). The hexagonal method did not have wide middle areas and could not accommodate large, modern, orchard machinery (Paddock and Whipple 1913:42). To get a maximum of 55 trees to an acre, and still use the square or rectangular system, journals suggested a distance of 26 feet between trees and 30 feet between rows, although some journals recommended spacing as wide as 50 feet for apples (Paddock and Whipple 1913:46).

Farmers were discouraged from planting filler trees, or trees planted within the larger pattern sequence, to be pulled and replanted as the other trees matured. Most farmers, it was suggested, “lacked the courage” to pull a filler tree if it was able to still produce a crop, damaging the shape of the permanent tree in the process (Paddock and Whipple 1913:46). Apples could be kept on site longer without immediate shipping, which relaxed the time frame between picking and shipping.

A 1926 Army Air Corp aerial photograph for the site indicated that only the eastern part was contained within a fruit orchard, which extended only halfway between the St. Jones River and Highway 113 (Figure A.14). Only a rectangular planting scheme was utilized on the Richter farm at that time. The fruit trees in the photograph probably represent the trees mentioned in the 1913 farm journal. The eastern part of the property has been plowed for an unidentifiable crop. The bluff edge above the St. Jones River contained few trees and some brush, and was apparently not utilized by the farmer.

A 1937 DelDOT aerial photograph for the site indicated the eastern part of the site was contained within an orchard, which extended the entire length of the tract from the rim above St. Jones Creek to Route 113 (Figure A.15). The patterning of the trees shows both rectangular and hexagonal planting was utilized on the Richter farm. The growth of the trees suggests that the portion of the orchard covering the site was several years old in 1937.

An aerial photograph taken just prior to the construction of SR 1 and the complete destruction of the orchard in 1995 (from Terraserver) illustrated that the orchard was very old by that time and in disrepair (Figure A.16). The fruit stand was still present by the highway but the two Richter houses had been razed. The eastern half of the tract was cultivated and used to grow vegetables to help supplement the farmer’s income since the condition of the orchard was obviously in steep decline. The owner probably tried to get as much out of the fruit farm as possible with as little upkeep as necessary before the impending highway construction.

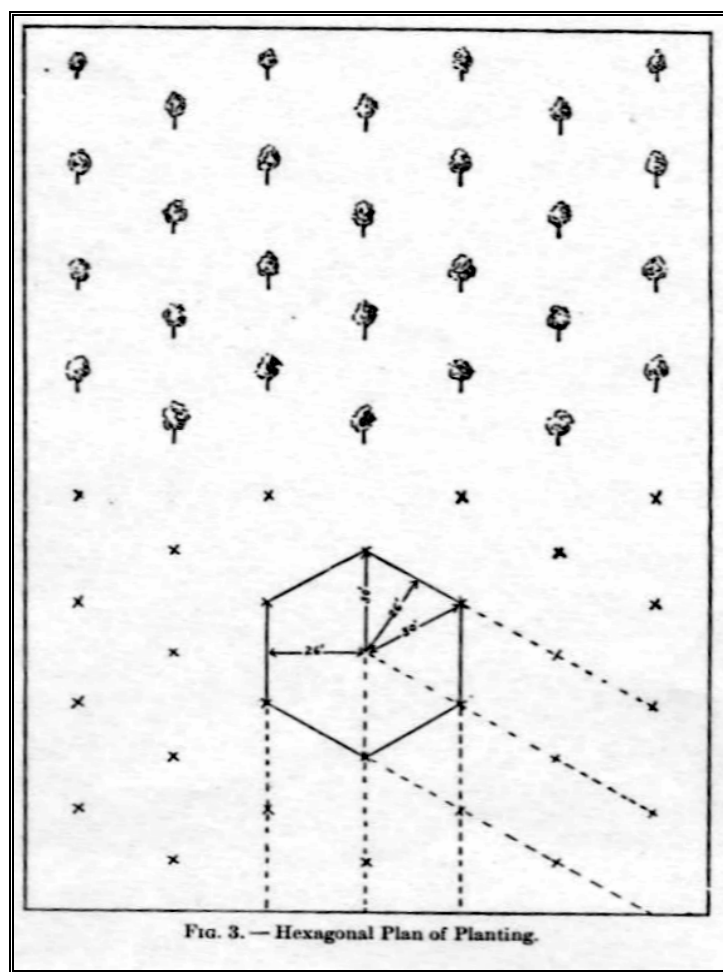


Figure A.13 Schematic of the Hexagonal Tree Planting Pattern for an Orchard Circa 1913

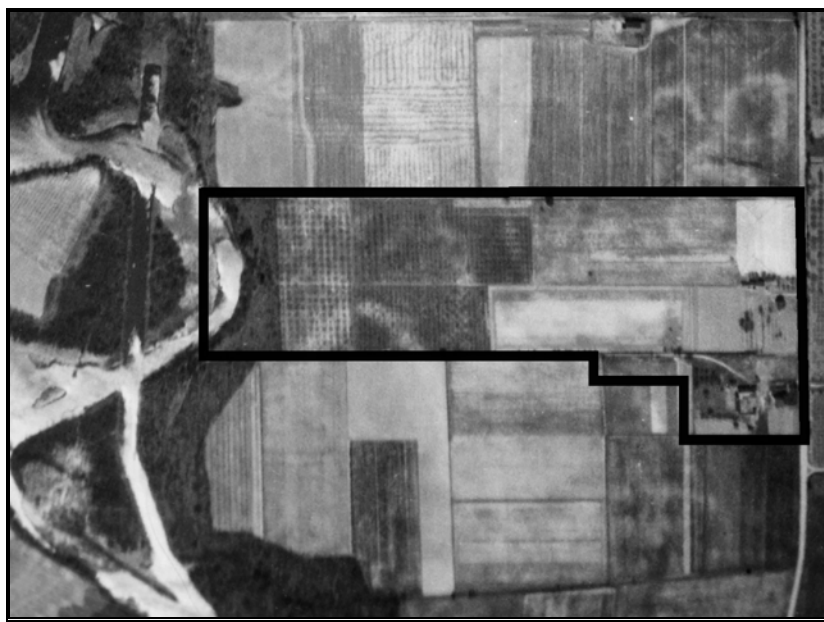


Figure A.14 The Richter Orchard in a Rare 1926 Army Air Corp Aerial Photograph



Figure A.15 1937 Aerial Photograph (DelDOT) Showing Extent of Orchard West of Highway 113

The major land use for the land tract containing Hickory Bluff was for orchard and vegetable production since the early 1900s. While the land was probably cultivated prior to that time, the archival records do not differentiate between that tract and other acreage encompassed by the owners described in the tax and census records. The historical artifacts from the site probably originated at the main house complex and were discarded along the bluff or the “backside” of the property, with the exception of the clay pipe stems and Spanish coins. The latter artifacts predated the orchard and probably predated the earliest cultivation of the property when the Christ Church group owned the land.

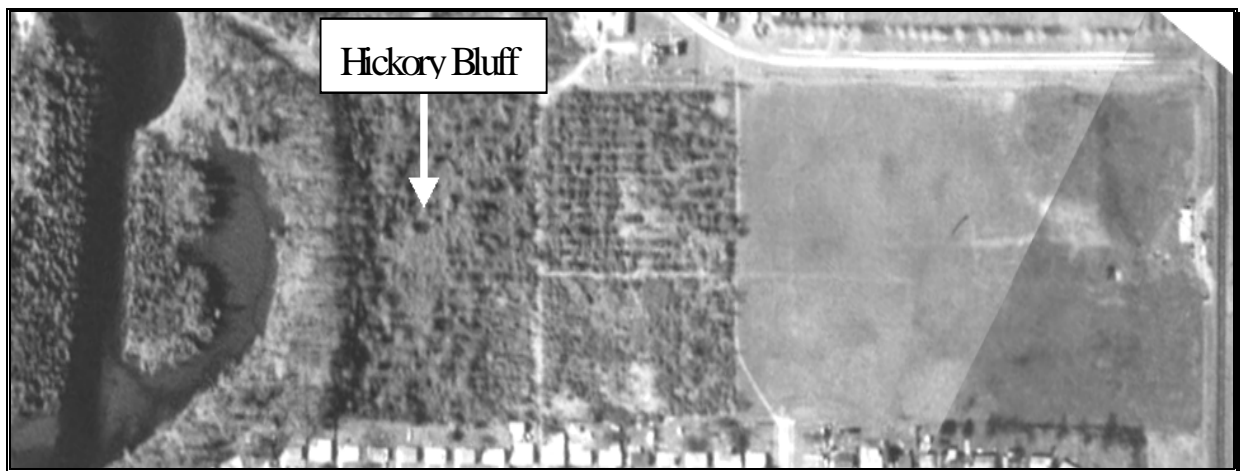


Figure A.16 1995 Aerial Photograph of the Orchard, Just Prior to Demolition

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